

## REMARKS

### In the Drawings

The Examiner objected to the drawings because they did not have sufficient labels; specifically boxes 34, 34A, 43 and 35 were cited. The blank boxes in the drawing have been descriptively labeled in the proposed drawing amendments submitted herewith.

### The Rejection of Claims 1, 9, 13, 14, 17, 25, 29 and 30 under 35 U.S.C. 102(b)

Claims 1, 9, 13, 17, 25, 29 and 30 were rejected under 35 U.S.C. 102(b) as being anticipated by the Applicant's own U.S. Patent No. 5,986,860. Claims 1 and 17 are the only independent claims in this group of claims and have been amended.

The Examiner observed that the '860 patent "discloses a method and corresponding detection system for detecting arcing faults in a defined zone of an electrical circuit comprising splitting a conductor in each said defined zone into a pair of substantially identical parallel insulated conductors, thereby defining a detection zone comprising the length of said parallel conductors between end points where the two conductors are coupled together, providing a current sensor (i.e. toroidal transformer current sensor) operatively associated with each said pair of parallel conductors, and configuring and arranging the current sensor and said conductors such that the current sensor produces a signal representative of a difference in the current flow in the two conductors." However, the '860 patent does not disclose a system that includes Applicant's "single pair of substantially identical parallel insulated load conductors for each zone in which arcing is to be detected" and "balancing core operatively associated with said pair of parallel load conductors," as required by amended claim 1. While series arc fault detection is improved by the bifurcation of the load wires coupled with the current sensor described in the '860 patent, parallel arc fault detection is not. The system claimed by Applicant provides "a detectable current unbalance in the presence of said parallel fault by inducing mutually canceling insertion impedances in said pair of parallel load

conductors,” as required by amended claim 17. Thus the Applicant’s present invention is clearly distinguished over the ‘860 patent by both claims 1 and 17 as now amended.

**The Rejection of the dependent claims 2-16 and 18-32 under 35 U.S.C. 103)**

Dependent claims 2-16 and 18-32 are respectively dependent on claims 1 and 17 and are therefore allowable for the same reasons set forth above with respect to the independent claims. The distinguishing features mentioned above in the amended claims 1 and 17 are absent not only from the ‘860 patent, but also from all the secondary references cited in the 103 rejections of the dependent claims.

Reconsideration of this application in light of the foregoing amendments and remarks is respectfully requested.

A check is enclosed for \$228.00 to cover the fee for additional claims. The Commissioner is authorized to deduct any additional fees required (except for payment of the issue fee) from or to credit any overpayment to Jenkins & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47181-00193USP1.

Respectfully submitted,

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Date



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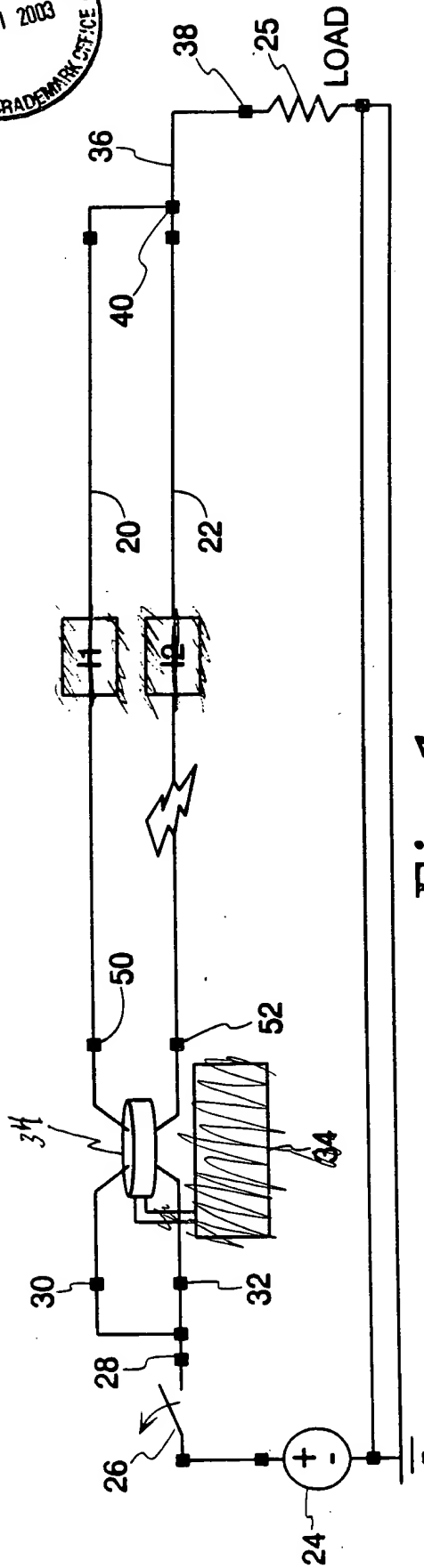


Fig. 1

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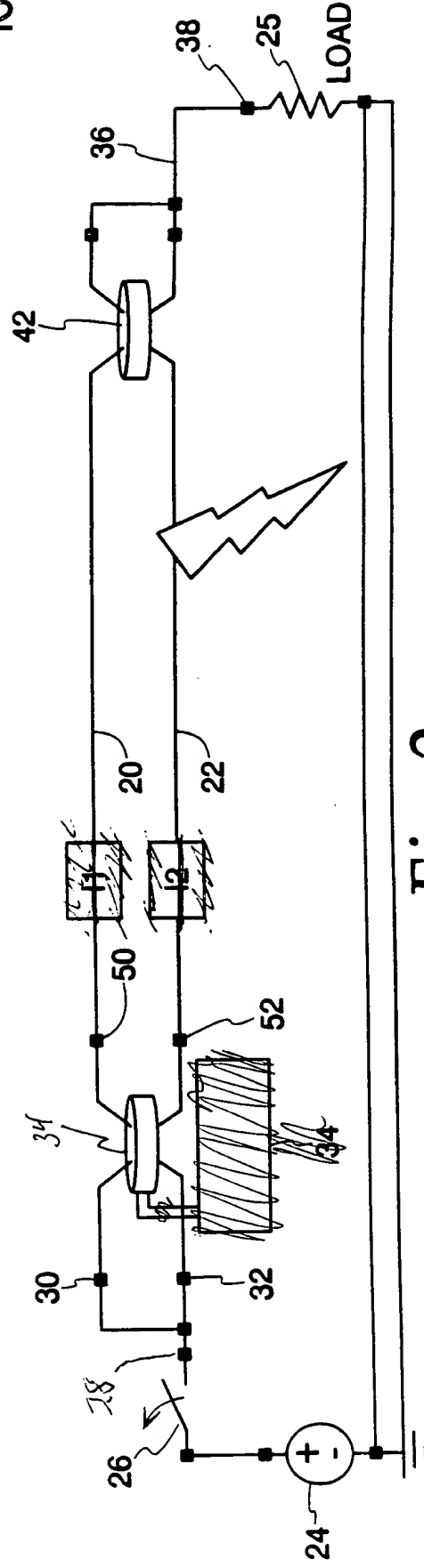


Fig. 2

